

**DEPARTMENT OF HUMAN SERVICES
HEALTH AND ENVIRONMENTAL TESTING LABORATORY
PUBLIC WATER TESTING GUIDE**

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This Guide is intended to summarize the State Health and Environmental Testing Laboratory's ability to provide analytical support for the most recent EPA Safe Drinking Water Act (SDWA) requirements. The SDWA has undergone at least 8 major rule changes for analytical testing since its inception in 1975. Phase II and Phase V regulations increase the number of parameters monitored from 35 to 84 (including regulated and unregulated parameters) and significantly increase the technical complexity of the analytical procedures and instrumentation.

INORGANIC WATER TESTS

Test E1	Inorganics/Coliform (Transient New Well approval)
Test E2	Inorganics (Transient New Well approval)
Test E4	Lead and Copper (Lead and Copper Rule)
Test E5	Corrosion Treatment Parameters
Test E6	Inorganics (CWS & NTNC Phase II/V and Secondary)
Test UV Treatment	UV Treatment
Test Fluoride	Test for Fluoride
Test TG	Test for Total Coliform (Coliform Rule) routine compliance
Test Arsenic	Arsenic
Test Antimony	Antimony
Test Uranium	Uranium
Test TNN	Test for Nitrate & Nitrite
Test Color_	Test for color
Test Turb	Test for Turbidity
Test Cyanide	Test for cyanide
Test Standard Plate Count	Standard Plate Count
Test Conductivity	Conductivity
Test TG	Test for Total Coliform Recheck (Coliform Rule) Required for
rechecking an initial positive	Coliform
Test Alkalinity	Alkalinity

TESTS FOR ORGANIC COMPOUND CONTAMINANTS

Test THM 524	Tri Halomethanes
HAA_552	Haloacetic Acids
Test SVO 525	Semi-Volatiles by GC/MS (Phase II and V)
Test Chlorinated Acids	Herbicide Screen (Phase II and V)
Test Carbam 531	Carbamate Screen (Phase II and V)
Test Pest Cl Pcb's 508	Toxaphene, Chlordane, PCB's + Test O compounds
Test VOC 524	Volatile Organics (Phase II and V)
Test TOC	Total Organic Carbon

RADIOLOGICAL TESTS

Test Gross Alpha	Gross Alpha
Test V	Radium
Test Radium 228	Radium 228 Only
Test Radon	Radon in Water

Currently the State of Maine HETL is not certified for Asbestos and Diquot. The State of Maine has been granted Waivers for Glyphosate, Dioxin, EDB, and DBCP. Other tests are available and may be listed in other testing guides: Private drinking water testing, Environmental, or special requests. Prices are the result of regulatory administrative procedures, either from individual price determination, or from the application of the approved regulated hourly rates.

INORGANIC WATER TESTS

* **TEST Color \$16.00 per Test**
TEST CODE - COLOR_LACHAT

* **TEST TNN- \$ 31.00 - THIS IS A TEST FOR NITRATE & NITRITE**

* **TEST CONDP \$16.00**
TEST CODE – CONDUCTIVITY
Conductivity

Test Cyanide \$66.00

Required initial test for community and non-transient water systems. This test will also satisfy the Phase V cyanide monitoring requirements.

* **TEST E1 \$165.00** (TE2 with total coliform and e.coli)

* **TEST E2 \$154.00¹**

This is a required initial test for transient water systems. (Note: TE2 & TE3 have been combined into the TE6 for community and non-transient water systems.) The test includes: NITRATE AND NITRITE NITROGEN, CHLORIDE, HARDNESS, FLUORIDE, COPPER, IRON, MANGANESE, ZINC, ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, MERCURY, SILVER, SELENIUM, SODIUM, COLOR, TURBIDITY, & pH

¹ IF EPA MANDATES ADDITIONAL DIGESTION, AN ADDITIONAL \$17.00 IS NECESSARY

* **Test E4 LEAD & COPPER \$30.00** Lead & Copper by EPA Method 200.8

* **Test E5 Corrosion Treatment Parameters \$66.00**

If the lead and copper rule is exceeded, the parameters include: Alkalinity, Calcium, Conductivity, and Silica

***Test E6.1 Phase II/V and secondary without Nitrate & Nitrite \$240.00**

This test is a required initial test for community and non-transient water systems. This test also combines most of the TE2 & TE3 to satisfy the Phase II/V requirements.

The test includes:

CHLORIDE, TOTAL HARDNESS, CALCIUM, MAGNESIUM, FLUORIDE, SULFATE, ANTIMONY, URANIUM, BERYLLIUM, NICKEL, COPPER, IRON, MANGANESE, ZINC, ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, MERCURY, SILVER, SELENIUM, SODIUM, THALLIUM, COLOR, TURBIDITY, & pH

***Test E6 Phase II/V and secondary with Nitrate & Nitrite \$270.00**

This test is a required initial test for community and non-transient water systems. This test also combines most of the TE2 & TE3 to satisfy the Phase II/V requirements.

The test includes:

NITRATE & NITRITE, CHLORIDE, TOTAL HARDNESS, CALCIUM, MAGNESIUM, FLUORIDE, SULFATE, ANTIMONY, URANIUM, BERYLLIUM, NICKEL, COPPER, IRON, MANGANESE, ZINC, ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, MERCURY, SILVER, SELENIUM, SODIUM, THALLIUM, COLOR, TURBIDITY, & pH

*** Test Nitrate and Nitrite \$31.00**

Test code – TNN

*** Test Nitrate \$20.00**

Test code – Nitrate Nitrogen

*** Test Nitrite \$20.00**

Test code – Nitrite Nitrogen

*** Test FLUORIDE \$20.00 per Test**

*** Test Total Coliform & E.coli \$20.00 per Test**

TEST CODE - TG

*** Test Total Coliform & E.coli Recheck \$20.00 per Test**

TEST CODE – TG

Recheck samples are required when the initial bacteria test is positive for total coliforms.

Three or four recheck samples are required depending on the number of samples taken each month.

*** Test Standard Plate Count \$20.00**

TEST CODE – STANDARD PLATE COUNT

***Test TURBIDITY \$16.00**

TEST CODE - TURB

***NEW TEST: UV_TREATMENT \$ 157.00**

This must be done prior to installing UV Treatment as described in the Maine Drinking Water Program U V Light Policy and will test for:

Ph, Total Suspended Solids, Hydrogen Sulfide, E. coli, Total Coliform, Iron Bacteria, Total Hardness, Dissolved Iron, Magnesium, Dissolved Manganese, Turdidity, & UV_254nm Transmittance.

***Test Arsenic \$20.00**

***Test Antimony \$20.00**

*** Test Alkalinity \$26.00**

TESTS FOR ORGANIC COMPOUND CONTAMINANTS

- **TEST N \$160.00**
- **TEST CODE – VOC 524**

The VOLATILE ORGANICS SCREEN utilizes EPA method 524.2.

Listed below are all the compounds routinely tested for using the HETL Volatile Organic Test (EPA Method 524.2). Fuel mixtures such as gasoline, kerosene, and fuel oil #2 may also be detected by this method; but are not quantitated. If a fuel mixture is detected in your sample we recommend that it be retested by the Volatile Petroleum Screen (Test M) which is specifically designed to test for these fuel mixtures. This test replaces a previous test; and Trihalomethanes are now quantitated.

Benzene	Bromobenzene
Bromochloromethane	Bromomethane
n-Butylbenzene	sec-Butylbenzene
tert-Butylbenzene	Carbon tetrachloride
Chlorobenzene	Chloroethane
Chloromethane	2-Chlorotoluene
4-Chlorotoluene	1,2-Dibromo-3-chloropropane
1,2-Dibromoethane	Dibromomethane
1,2-Dichlorobenzene	1,3-Dichlorobenzene
1,4-Dichlorobenzene	Dichlorofluoromethane
1,1-Dichloroethane	1,2-Dichloroethane
1,1-Dichloroethylene	cis-1,2-Dichloroethene
trans-1,2-Dichloroethene	1,2-Dichloropropane
1,3-Dichloropropane	2,2-Dichloropropane
1,1-Dichloropropene	Ethylbenzene
Hexachlorobutadiene	Isopropylbenzene
p-Isopropyltoluene	Naphthalene
Methylene chloride	n-Propylbenzene
Styrene	1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane	Tetrachloroethene
Toluene	1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene	1,3,5-Trichlorobenzene
1,1,1-Trichloroethane	1,1,2-Trichloroethane
Trichloroethene	Trichlorofluoromethane
1,2,3-Trichloropropane	Trichlorotrifluoroethane
1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
Vinyl chloride	o-Xylene
m-Xylene	p-Xylene

*** TEST O 525 \$240.00**

TEST CODE – SVO 525

The SEMI-VOLATILES ORGANIC SCREEN test uses a solid phase extraction technique to extract higher boiling compounds from the water sample. This is an EPA GC/MS method that follows EPA procedure 525.2.

Current analytes include:

Hexachlorobenzene, Hexachlorocyclopentadiene, Benzo(a)pyrene, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Alachlor, Endrin, Lindane, Simazine, Aldrin, Heptachlor, Heptachlor Epoxide, Methoxychlor, Atrazine, and Dieldrin.

• **TEST THAAC \$150.00**
TEST CODE – HAA 552

This test is performed according to Safe Drinking Water Act criteria for total HALOACETIC ACIDS. HALOACETIC ACIDS can result from chlorination of water used for drinking. The four HALOACETIC ACIDS: Chloroacetic acid, Dichloroacetic acid, Bromoacetic acid and Trichloroacetic acid are tested by EPA method 552.2 .

• **TEST P \$100.00**
TEST CODE – THM 524

This test is performed according to Safe Drinking Water Act criteria for total TRIHALOMETHANES. Trihalomethanes can result from chlorination of water used for drinking.

The four chlorination byproducts: chloroform, bromodichloromethane, chlorodibromomethane, and bromoform are tested by EPA method 524.2 (modified).

• **TEST Q1 HERBICIDE SCREEN \$220.00**
TEST CODE – CHLORINATED ACIDS

HERBICIDE SCREEN - A general screening method for the detection of the chlorinated acid herbicides (2,4-D) and residues of Dalapon, Dinoseb (DNBP), DICAMBA and PENTACHLOROPHENOL.

Method: EPA 515.2 - Determination of Chlorinated Acids in water by Gas Chromatography with an Electron Capture Detector.
EPA 552.2- For Dalapon

*** Test Q3 Carbamate Pesticides \$140.00**

TEST CODE – CARBAM 531

This is an EPA HPLC method 531.1. Current analytes include:

Carbofuran, Oxamyl, Aldicarb, Aldicarb Sulfoxide, Aldicarb Sulfone, 3-Hydroxycarbofuran, Carbaryl, Methomyl

• **Test TCP PESTICIDE SCREEN \$90.00**
TEST CODE – PEST CL PCBS 508 (replaces TCP)

NOTE: This test should be combined with Test O for Phase II and Phase V compliance, this test can not be ordered separately without Test O 525.

PESTICIDE SCREEN- A method for the detection of selected Chlorinated Hydrocarbon Pesticides and PCB's that cannot be seen by method 525.2 at the EPA MCL's.

Method: These compounds are extracted by 525.2 and analyzed by EPA Method 508. Determination of chlorinated pesticides in water by Gas Chromatography with an Electron Capture Detector. Analytes: Chlordane, PCB's and Toxaphene

Radiological Tests

TEST Radon Water \$30.00

TEST CODE – RADON WATER

The RADON WATER test tests for naturally occurring radioactive gas present in many drilled wells.

TEST Gross Alpha \$60.00

TEST CODE – GROSS ALPHA PPT

This test measures GROSS ALPHA, the naturally occurring radioactivity in water, but does not test for radon. This test is required for public water supplies.

*** TEST V \$215.00**

Test for RADIUM 226 & 228 in water. This test is mandated if gross alpha is more than 5 picocuries.

TEST VY \$165.00

TEST CODE – RADIUM 228

Test for RADIUM 228 ONLY in water.

*** TEST URANIUM \$20.00**

Test for URANIUM 238 in water. This test is mandated if gross alpha is more than 15 picocuries.

***TEST X \$60.00**

Test for GROSS BETA in water

***TEST GX \$94.00**

Test for GAMMA in water

***TEST UX \$99.00**

Test for GROSS ALPHA and GROSS BETA in water.

***TEST TX \$94.00**

Test for TRITIUM

NOTE: HETL ANALYSIS PROCEDURE FOR PHASE II AND V TESTING

The HETL has agreed to send water collection kits to those systems identified by the DHE. These systems have been grouped in segments in order to allow better scheduling of complex tests.

Sample containers are sent out using the DHE listing. If the water supply chooses not to use the HETL, the bottles should be sent back to the HETL along with a notification to DHE indicating the name of the certified laboratory that will perform the analysis.

Filled water bottles should be sent to the HETL within 30 days in order to assure proper analysis. Bottles (full or empty) that are not received within this 30 day time frame shall indicate non-compliance with mandatory testing. The names of systems not returning sample bottles will be reviewed by DHE.